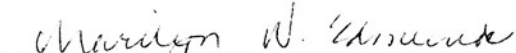


A DESCRIPTIVE STUDY OF MILITARY NURSE PRACTITIONERS'
PRACTICE SETTING AND CLINICAL PRACTICE ACTIVITIES

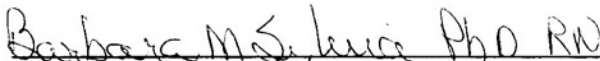


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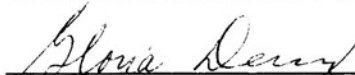
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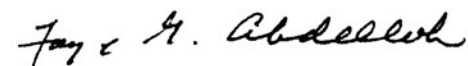

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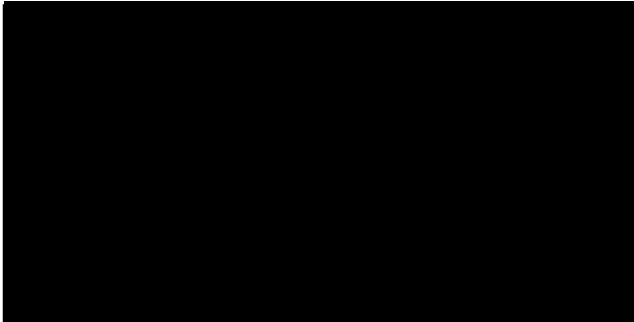
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ABSTRACT

The purpose of this study is to describe the practice settings of military nurse practitioners (NP) and their clinical practice activities. The patterns of behavior of the NP can be seen merging with/diverging from traditional nursing as well as medical activities. To elicit practice setting and clinical activities information from military NPs a questionnaire was used. It consisted of two parts: demographic information and practice activities. The questionnaires were mailed to active duty Air Force, Army and Navy NPs whose names and duty locations were obtained from the respective services. A description of the data is presented. Describing the military NPs practice setting may help to identify the context within which the military NP role participates. Describing the clinical practice activities may likewise provide an understanding of the behavioral characteristics needed to define the role further.

A DESCRIPTIVE STUDY OF MILITARY NURSE
PRACTITIONERS' PRACTICE SETTINGS AND
CLINICAL PRACTICE ACTIVITIES

by

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THESIS

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FORWARD

It is with great anticipation that I step into a new role as a Family Nurse Practitioner. To provide assistance to fellow human beings in need has always come naturally for me. Expanding my role as a Registered Nurse to that of a Nurse Practitioner allows me to continue this calling.

There are too many people with too many needs. The provision of health care is a responsibility that must be shared by several levels of providers in order to meet the several levels of health care needs in a timely manner so as to make it beneficial to the very persons for whom it is intended.

Registered Nurses provide health care on a daily basis, be it at the bedside or from within an office setting. Illness prevention, wellness promotion and patient education are not new concepts to nurses. For hundreds of years it has been the nurse who carried this forward. With this nursing experience and the acquisition of advanced education, the Nurse Practitioner is capable of providing a broad range of services thus improving the availability and affordability of needed health care.

DEDICATION

Let your light shine before men in such
a way, that they may see your good works,
and glorify your Father who is in heaven.

Matt. 5:16 (NASB)

Laudably presented, this thesis and with it the completion of this degree, could not have transpired without the assurance pledged by my Lord, and the loving support of my parents.

To the nurse practitioners who took time from their busy schedules to complete the validity and reliability testing of this study's tool, most appreciative recognition is made. To the many nurse practitioners who spared their few free moments to complete the questionnaire, without you this study would not be as it is: resounding applause and accolade.

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CHAPTER ONE: THE RESEARCH PROBLEM

Introduction

The purpose of this study was to describe the practice settings of military nurse practitioners (NP) and their clinical practice activities. The descriptive nature of this study provides insight into the daily working environment of military NPs and may provide the ground work for future studies of military Nurse Practitioners.

With the need to increase access to health care, a legacy of health care policy review and debate began. In 1965 the concept of the nurse practitioner role was established in an effort to meet the demand for increased access to health care (Anderson, 1994). According to Anderson (1994), support for the NP role will be derived from "compromises with powerful lobbies and after a bitter struggle between organized nursing and medicine over the qualifications of nurses to deliver primary care services" (p. 101).

For the past thirty years the nurse practitioner, the role of the nurse practitioner, their clinical decisions, cost-effectiveness and education have been the topics of books, journals and research. Some authors compare the

nurse practitioner to other health care team members, most offer general equal-to-physician evaluative ratings. Too few are amenable to posit the NP as a valuable team component and most declare with certainty the need for more research (Vacek & Ashikaga, 1980).

The American health care system is undergoing significant change as a result of pressures stemming from numerous factors. Two such factors have been the lack of access to physicians experienced by segments of the population and the movement toward a more active and more professionalized role in health care on the part of nurses. Taken together, these two factors have contributed to the emergence of a new type of health care provider-- the nurse practitioner (Garland & Marchione, 1982, p. 19).

The primary care provided by the nurse practitioner, in comparison to other primary care providers, is subjugated by state and local laws, financial and/or facility-specific restrictions. Prescott (1994) states that "the OTA [Office of Technology Assessment] and others have enumerated a substantial number of regulatory, legal, reimbursement, and

attitudinal factors that currently constrain the practices of nurses" (p. 250).

Hupcey (1993) studied work setting influences on the NP and found support or lack of it being of "utmost importance to the majority of respondents. Other factors included independence in the work setting, continuing education, past experience and/or education, patient appreciation, administrative support and trained co-workers.

Prescott (1994) states that there is "substantial evidence that nurses can provide the majority of primary care and many other basic services currently provided by physicians and that they can do so at substantially lower costs and without sacrificing quality" (p. 249).

Spitzer, Sackett, Sibley, Roberts, Gent and Kergin (1974) compared the health status of patients who received care from family physicians to that of nurse practitioners. Their results demonstrated that NP's provide primary care "as safely and effectively, with as much satisfaction to patients, as a family physician" (p. 255).

Statement of the Problem

As the health care debate continues, reform measures designed to cut costs yet maintain quality care will have significant impact on the provision of health care even within the military health care system. According to Levine (1994), the practice environments of military NPs are becoming similar to those of non-military NPs. Levine states "there are indications that, in the future, as it moves closer to a peacetime health care delivery model, the military health care system will play a greater role in providing primary health care to retirees and dependents" (p. 652). Furthermore, he states the need for active duty medical and nursing personnel, including nurse practitioners, will increase in order to meet the increased need for primary care.

Research Questions

Very little has been published on the role of the NP in the provision of health care in the federal government, particularly the Department of Defense (DoD), and specifically within the military health care system. The relevant questions to be answered were: (1). What is the military NP's practice setting? and (2). What are the military NP's clinical practice activities?

The role of the advanced practice nurse varies and is driven by the context in which it is performed (Madden and Ponte, 1994). Defining or describing the role of the military NP as it occurs at present, may serve to enlighten the professional community as to just what NPs do and to make recognition that NPs represent a group of cost-effective care providers who can sustain the quality of care and improve the access to care (Jennings, 1993).

Conceptual Framework

According to Garland and Marchione (1982) many writers who analyze NP concepts utilize "the basic assumptions, concepts, and propositions of role theory" (p. 23). In Role Theory Expectations, Identities, and Behaviors, Biddle (1979) examines the key concept that roles are associated with social positions which are in turn an identity, recognized sets of people, each behaving in a characteristic way, exhibiting a characteristic role. Likewise, roles are "not without effect, rather they are likely to have characteristic effects, or functions, within the social system" (p. 6).

Many of the functions that are performed by roles are understood, and people may be motivated to continue in their roles because they desire and approve the

function that they are accomplishing thereby. However, some functions of roles are inadvertent, accidental, or may be decried by all concerned. (p. 6)

Biddle (1979) defines the term role as a "behavioral repertoire characteristic of a person or a position; a set of standards, descriptions, norms, or concepts held for behaviors of a person or social position; or a position itself" (p. 9). Biddle discusses occupations and role changing by stating that roles involve more than training a person to follow expectations, that the person takes on an active mode of "accommodating, enjoying or suffering from, sometimes even changing, the social systems in which he or she participates" (p. 312). Adjustments to role changes, in an ever evolving society, may leave one unprepared to meet new demands. Because role definition is influenced by expectations and an expectation expresses a reaction to a characteristic (an evaluation of the status quo), roles are then influenced by the subject who holds the expectation, the object person involved, the specific context held by both, and particularly the characteristic behavior identified (p. 132).

From the very outset, when the expectation of access to health care appeared to be limited, the role of the nurse as

an option to expand access has been discussed (Price, Martin, Newberry, Zimmer, Brykczynski and Warren, 1992). Many of the behavioral characteristics of the white-uniformed, traditional nurse still play an influential part in the definition of the role of the nurse practitioner. Many of the traditional ideals of medicine influence the adjustment to the changes designed to meet societies health care demands:

The supply and demand for the services that the nurse practitioner is able to provide, the organizational structure of the health care system, the attitudes of health care consumers, and the attitudes of other health care providers are important determinants of the actual role a nurse practitioner assumes (Vacek & Ashikaga, 1980, p. 106).

Role theory employs the term "facet" as the scale, or form by which behavior is measured. Other sciences use the more commonly known term "variable". In either case, an operational measure is provided for behaviors and their distribution within the area of study (Biddle, 1979). In Vacek and Ashikaga's (1980) study of variables affecting nursing roles, they concluded that NP roles must be defined

in terms of specific functions if meaningful assessments of impact are to be made.

The patterns of behavior of the NP can be seen merging with/diverging from traditional nursing as well as medical activities. Vacek and Ashikaga (1980) state that the NP must perform the basic diagnostic and therapeutic functions of providing primary health care, yet must also retain the identity of a nurse, being "active in the psychosocial areas of health care that have been the nursing professions forte" (p. 122).

So then, the role of the military nurse practitioner is affected by and has an effect upon the nurse him or herself; the military health care system and service expectations, influences and adjustments; as well as the military health care beneficiaries' expectations, influences, and adjustments. Biddle (1979) states that "studies of occupational roles usually begin by observing...or by gathering descriptions of those behaviors from members or others" (p. 82). Describing the military NPs practice settings may help to identify the context within which the NP role participates. Describing the clinical practice activities may likewise provide an understanding of the

behavioral characteristics or repertoire needed to define the role further.

Operational Definitions

For the purpose of this study, the following definitions were used:

Military Nurse Practitioner: A Navy, Army, or Air Force Nurse Corps officer and Registered Nurse who has completed a formal NP program, acquiring additional knowledge and skills and has assumed a legitimate role as a primary health care provider within the military beneficiary population. The role includes health status assessment, provision of care, instruction and counseling and collaboration with other health care providers. Preparation in the provision of care in a combat situation is an additional requirement.

Practice activities: Clinical skills utilized to meet the clients health care needs.

Practice setting: The physical, psycho-social, legal, and educational influences within which the NP interacts while encountering patients and providing for the patients needs.

Limitations and Assumptions

Participants were selected from their respective services' personnel inventory lists based on their identification as Pediatric, Family, Adult, Primary Care, or Womens Health Nurse Practitioner. An equal distribution among the specialties was limited by the varying numbers between the services.

Systematic variation, or systematic bias (a consequence of selecting subjects whose measurement values are different in some way from the population) is another limiting factor to this study. Participants were selected from those assigned to stations within the United States and not from those overseas. Findings are therefore limited because they are generalized first to the accessible population (military NPs within the United States) and then, more abstractly to the target population (all military NPs).

The sample was limited to 250 of the 471 potential participants for cost containment purposes (mail fees). Because the sample size was greater than fifty percent of the population a power analysis was not conducted.

No attempt was made to distinguish the differing levels of preparation of the nurse practitioners prior to the mailing, although it was a response item on the

questionnaire. It was assumed that all NPs practice within their legal scope of care.

In using a mailed survey, validation of responses could not be ascertained. It was assumed that all participants answered the questionnaire honestly.

Summary

The purpose of this study was to describe the practice settings of military nurse practitioners (NP) and their clinical practice activities. The role of the advanced practice nurse varies and is driven by the context in which it is performed. This study combined the descriptive research design, the conceptual framework of Role Theory and use a surveyed to measure military nurse practitioners positions, interactions and behaviors. In so doing, descriptive answers to the research questions may be found. Generalizations from this study are limited to military nurse practitioners with in the United States. Chapter Two provides an overview of the literature as it applies to this study of nurse practitioner practice settings and practice activities.

CHAPTER TWO: LITERATURE REVIEW

The military health care system's primary mission is to support the military forces in combat (Levine, 1994, p. 652). However, in peacetime, there may be humanitarian missions not related to war or where health care is provided to other beneficiaries, for example, family members and retirees. Military NP's must be prepared to provide care in both peace and wartime settings. The purpose of this research is to describe the practice settings of military nurse practitioners and their clinical practice activities.

This literature review is limited to those studies specifically addressing NP practice settings and/or clinical practice activities.

Work Setting Factors

Sultz, Henry, Bullough, Buck and Kinyon (1984) conducted a longitudinal study of NP's employment settings comparing 1974 to 1982. The data was obtained by using a self-administered questionnaire delivered across the United States to the students of the class of 1973 and 1980 (N=1579, 72% response rate) six months following their graduation. This allowed for evaluation of the graduates practice setting but also for evaluating any change in those

settings over a seven years time. The NP's were queried as to employment success, functions, roles, income, and other circumstances of practice.

The findings revealed no differences in employment rate by sex, race, age, or geographic location. Income variation was not evident in 1974, where as in 1982, NP's employed in the west had a clear income advantage. In 1974, 61% of the NP's were engaged in exclusively NP functions growing to 76% in 1982. Sultz et al. (1984) summarize that this reflects growing acceptance of the NP. In 1982 fewer NP's were expected to provide care different from their specialty (e.g., Pediatric Nurse Practitioner's caring for adult patients) than in 1974. From 1974 to 1982 there was a decrease in the percentage (34% to 26%) of NP's reporting the physical presence of a physician in their primary health care setting. Sultz et al. (1984) conclude that NP's have become an "integral and viable component of the health care system" (p. 162).

Wilbur, Zoeller, Talashek, and Sullivan (1990) studied the career trends of Family Nurse Practitioners graduating from the University of Illinois between 1974 and 1984 (n=94, 83% response rate). Their survey-questionnaire obtained information on employment, professional practice and

demographic variables. Similarly descriptive in its structure to this study, the researchers sought comprehensive data, not statistical significance. The survey showed that the number of NP's in direct care roles remained stable at 45% from 1974 to 1984. They defined direct care as responsibility for health promotion, protection against disease, and management of health problems encountered by the client. Hospital outpatient clinics and community based clinics were among the largest employers. They also found that 92% of the NPs worked full-time. They conclude, based on their findings, that NP's demonstrate a long-term commitment to practice in the NP role.

Hupcey (1993) also studied the work setting of nurse practitioners in order to describe factors that may positively or negatively influence a NP's performance. In a random sample of 200 from 1200 certified Nurse Practitioners in the state of Pennsylvania, a mailed survey asked respondents what particular work settings or factors most helped and most hindered their performance of the NP role. The provision of direct patient care as a nurse practitioner was the primary criterion for selection and all specialty areas were represented. Descriptive statistics were used to

analyze the data. Generalizability was limited by the surveys low yield (N=80). Hupcey states that "the presence or absence of support from either coworkers or superiors (physicians, nurse practitioners, nurses, administration, and other staff members) was the overwhelming factor influencing nurse practitioner role performance" (p. 184).

In Fitzgerald, Jones, Lazar, McHugh and Wang's (1995) journal article "The midlevel provider: Colleague or competitor?" they argue that midlevel providers, NPs and Physician Assistants (PA), offer a solution to the shortage of primary care physicians. They state "turf invasion can be an issue as well: Some doctors fear having their role usurped. But zero-sum thinking--your win is my loss--can be counter productive in today's environment" (p. 20). Citing figures from the US Department of Health and Human Services 1992 Annual Report to Congress, they state that 61.4% of NPs work with a physician on site, 22% work under written protocols, 12.6% have access to a physician by telephone and only 1.7% have no contractual involvement with a physician. They state that NPs prescribe less, order fewer tests and less expensive treatments and spend more time in patient education than physicians. They qualify NP provision of health care as "coordinated ongoing care designed to

maintain health while managing common acute and chronic illnesses" (p. 22).

Ventura and Feldman (1989) studied the variables that constrain or facilitate the practice of Veterans Administration (VA) nurse practitioners. They used a self administered questionnaire and random stratified sampling (n=257, 92% response rate). The researchers pre-tested their tool on 50 NPs then conducted a test-retest on 16 NPs. Validity and reliability scores were not offered. They found that one of the constraining factors identified by the NPs was lack of distinction between the role of the NP and that of both PAs and clinical specialists. The NPs identified having too many clerical duties as well as lack of clerical support as constraining. Facilitators identified by the NPs were patient and family interactions, access to patients and clinical privileges. Interactions with physicians facilitated more than constrained the NPs. Role independence was also seen as a facilitator. They found that the hospital complexity had no predictable influence as facilitating or constraining the NP role. Interestingly, NPs in the Mid-West were less likely to report that the person responsible for their evaluation perceived the role accurately. Ventura and Feldman suggest

that "if NPs experience a feeling of status in their positions, are given opportunities for professional growth and experience personal satisfaction, their practices are facilitated" (p. 310).

NPs in the state of Alabama were surveyed by Sirles, Leeper, Northrup and O'Rear (1986) in order to describe the employment setting situations and practice activities there. The study used a mailed survey questionnaire methodology and the sample had 110 respondents. A significant limitation to the study however, is that the responding NPs received training through continuing education certificate programs in Alabama, thus limiting the generalizability of the results. Seventy-eight percent of the NPs were employed full-time and reported that patient fees were similar for both NP and physician visits. The largest percent of responding NPs were employed in a health department setting (29.4%) or hospital outpatient department setting (27.1%). Private office settings, group or solo physicians, were 14.1% and 12.9% respectively. Other settings listed by 9.4% of the NPs were emergency care, psychiatric, school and gerontology sites. The number of patients seen per week were 67 to 77 with NPs in private offices seeing more patients per week than those in hospital outpatient

departments. NPs in hospital outpatient departments however were found to consult physicians more frequently than those in private office settings. Eighty percent responded they worked under jointly prepared (NP and physician) written protocols. Seventy-five percent reported they saw patients at some time without a physician on site, but the physician was readily available otherwise. The largest percentage of types of patient seen were in routine visit and chronic disease categories.

Sirles et. al. (1986) divided the survey of NP practice activities into five categories: data collection, patient assessment and intervention; technical activities; out-of-office practice; administrative; and supervisory activities. More than 85% of the NPs performed activities related to the patients primary care. Some of the most frequent to least frequent technical skills reported were cultures, phlebotomy, injections, immunizations, urinalysis, electrocardiograms (ECG) and suturing. Seventy-seven percent reported supervising other clinic personnel, 43.6% conducted inservice teaching and 40.9% taught students. They concluded that "in chronic disease and minor acute illness where learning self-care is a major patient need, nursing care (with its emphasis on patient education) may be

more beneficial than medical care for maintaining health and containing costs" (p. 383). Although these results are specific to Alabama nurse practitioners, Sirles et. al., conclude that their results were similar to those of NPs across the nation.

Nurse Practitioner Activities

Prescott, Jacox, Collar and Goodwin (1981) describe the nurse practitioner role as "a blending of medical or cure activities with the supportive or care activities associated with the more traditional nursing role" (p. 224). Prescott et al. provide a differentiation of the concept of the care-cure distinctions: "The primary role of medicine comprises diagnosis and treatment--the cure process. In contrast, the primary role of nursing lies in the care process, expressive in nature and consisting of caring, helping, comforting and guiding" (p. 224).

Prescott et al. (1981) developed the Nurse Practitioner Rating Form in order to measure the nursing components of the role (patient teaching and psychosocial interactions) as well as medical activities of NP practices. They state their literature search found no existing measure for evaluating aspects of nurse practitioner practice in ambulatory settings. They developed the tool over a 2 year

period, interviewing experienced nurse practitioners and educators and conducting extensive reliability and validity testing (interrater reliability estimate was $r=.85$). Their results categorized NP activities as: 1) history taking, 2) physical examination, 3) treatments or procedures, 4) advice, directions, instructions (verbal directions without explanation), 5) providing factual information, 6) explanation (advice or information with rationale), 7) demonstration, and 8) consultation. They also categorized patient teaching by NPs into: 1) somatic aspects of existing problems, 2) psychosocial aspects of existing problems, 3) somatic aspects of health promotion, and 4) psychosocial health promotion. Prescott et. al. contend that the Nurse Practitioner Rating Form tool has an advantage over other forms of measure because it uses the provider-client visit rather than the patient record as the source of information. Perhaps a draw back to the Nurse Practitioner Rating Form is its focus on the provider alone. Patient-outcome measures are not part of the tool.

Ward (1979) surveyed Family Nurse Practitioners (FNP) across the United States (N=327, 83% response rate) investigating the health needs of the population served by the FNPs and the FNP's self-perceived competencies

(knowledge, skill, and ability to accomplish a task in a safe, effective manner) to provide appropriate care. The survey revealed that the FNP obtained histories, performed exams, taught health promotion or care related to a chronic or acute disease or disability, and provided well child care and immunizations. The FNP's most frequently encountered health problems were cardiovascular and respiratory problems, followed by neurological, musculoskeletal, ears, nose, and throat complaints. The findings were significantly influenced by practice site (e.g., physicians office rather than a community clinic), the urban or rural population, and the economic setting (specifically in regard to consultation and referrals made). The researchers concluded that, with continued research, the FNP's activities might be further brought into focus.

Vacek and Ashikaga (1980) compared FNP graduates (a non-degree program) of the University of Vermont to Vermont nurses practicing in similar settings. They used a self-completion questionnaire that underwent content validity review and pretesting, and follow-up reliability testing by interview. The questionnaire presented 20 different activities related to health care delivery including standard nursing functions as well as "those functions

hypothesized to be characteristic of expanded nursing role" (p. 107). Vacek and Ashikaga found the largest differences between the nurse practitioners and the nurses were with performing physical exams, prescribing medications, instructing patients about medications, counseling patients about their conditions and counseling patients on wellness. The NPs were more likely to perform these functions than the RNs. They concluded that "the nurse practitioner role involves an expansion of existing nursing functions, rather than the performance of new types of activities" (p. 122).

Southby (1980) studied the role of the Primary Care Nurse Practitioner (PCNP) in the Army Health Care System, specifically expectations and perceptions of the role held by Army NPs, nurses, and patients. The sample was a purposive sample of Army NPs (n=28), nurses (n=28) and patients (n=168) at the military medical treatment facility at the time of the data collection. The measurement tools used were: a Background Information Form, used to elicit demographic information; a Role Performance Index which was a variation of a pre-existing index; and a Choice of Health Care Provider questionnaire based on four established studies. Pretesting and content validity was completed through independent agreement of five experienced nurse-

researchers. The patients were divided into two groups, those having experienced care by an NP and those who had not. Southby found that NPs and nurses had similar expectations for the role of the PCNP. Patients of NPs held higher role expectations than did the non-NP experienced patients. The NPs role expectations were higher than their patients and much higher than those by patients of other health care providers. Some of the practice activities that both the NP and the patients indicated were not important behaviors for the PCNP were deciding to treat based on Xray and ECG findings, drawing blood, taking an ECG, performing minor surgical procedures or giving immunizations. Behaviors held high by the NPs but low by the patients were deciding whether the patient had a medical problem, performing perinatal care, initiating treatment based on diagnostic tests, teaching family planning or rehabilitative care, taking a Pap smear, referring or consulting physicians and prescribing or adjusting new medications. Southby states that although the NPs understood their role, the patients did not. Southby suggests laymen need a valid concept of the role of the nurse practitioner so that they may have realistic expectations of the care provided to them

by nurse practitioners. Southby concludes that "when all role positions in an interaction are fully informed regarding the behaviors expected, the likelihood of a mutually satisfying and successful relationship is greater" (p. 664).

R.A. Kane, R.L. Kane, Arnold, Garrard, McDermott and Kepferle (1988) studied Geriatric Nurse Practitioner's (GNP) practices within nursing home settings. An experienced interviewer conducted telephone interviews with GNPs (n=30), Directors of Nursing (DON) (n=27) and Administrators (n=29). The administrators were found to be vague about the role of the GNP as compared to the DONs. The GNPs identified their most frequent activities were routine or episodic physical exams, monitoring and/or ordering drugs, ordering lab tests, providing critical care activities such as intravenous therapy or nasogastric feedings, facilitating rehabilitation efforts and providing counseling to residents and family. When asked what were the barriers to their practice the GNPs identified regulatory constraints, lack of reimbursement, isolation and role confusion and poor equipment.

While comparing Pediatric Nurse Practitioner (PNP) and physician costs in a military outpatient facility, Brodie, Bancroft, Rowell and Wolf (1982) found only slight

differences between the care variables delivered by the PNPs and the physicians. This data was collected through retrospective chart review (n=395). The PNPs (n=187) saw as many patients and worked with sick and well children at initial and/or return visits as often as the physicians (n=208). The PNPs ordered medications as often as the physicians and similarly provided teaching or guidance. Although the significance of this study was to point out the cost savings of using PNPs in providing primary health care, it secondarily provides data that indicated the PNPs accomplished similar care to that of their physician counterparts.

Nolan, Beaman and Sullivan (1988) examined practices of NPs by surveying NPs across the nation (n=986, 62% response rate). The questionnaire was initially developed by an expert committee of nurse researchers for a national survey by the Division of Nursing, Department of Health, Education, and Welfare. Validity checks were built-in by eliciting the same information in different ways; test-retest reliability testing was also done. Respondents were asked about 12 different activities performed on well patients, 7 activities performed on ill patients, and their consultation practices. The study found that all the NP respondents

performed the general assessment and management skills listed. A lower percentage of the NPs performed exams on younger children, newborns and third trimester maternal care. The NPs consultation rate was highest for activities related to drug therapy. The NPs performed activities related to illness care more than wellness care.

Brown and Waybrant (1988) examined the nursing component of the NP role by studying the extent to which the NPs were involved in health promotion, education, nutrition and/or exercise counseling, health screening, family planning and risk factor analysis. The questionnaire underwent content validity expert review and was pretested by practicing NPs. Competencies surveyed were based on those taught in the primary health care program of a Pacific Northwest University. Of the responding NPs (n=110, 82% response rate) referrals for mental health, social work, drug rehabilitation, vision services, alcohol and hearing services were the most frequent activities coordinated by the NPs. Disease and medication education activities were also frequently reported. The NPs responded that on the day they filled out the survey they addressed lifestyle modification (exercise, diet, smoking cessation) or stress management counseling to at least one client, disease

specific counseling to an average of seven clients, counseling about medications to an average of six patients per day and psychological issues were addressed with three patients per day. The most frequently cited screening activities were blood pressure, Pap smears, breast exams and diabetes testing. Fifty percent of the NPs addressed hygiene, immunizations or safety to at least one patient per reporting day. The authors conclude that this study strongly supports the perception that NPs have a prominent role in patient education and health promotion.

In their book The Roles of Physician Assistants and Nurse Practitioners in Primary Care, Clawson and Osterweis (1993) conclude the results of a 38 article meta-analysis. They state the NPs had equivalent scores to physicians on patient knowledge and have equivalent prescribing rates. However, the nurse practitioners provide more health promotion activities, score high on quality-of-care measures, ordered more, albeit less expensive, laboratory tests, scored higher on resolution of patients problems, and achieved better functional status, patient satisfaction and patient compliance.

Summary

Biddle (1979) explains that the role a person expresses is an identity, characteristic behaviors, or set of expectations. Behaviors are patterned within contexts, associated and governed within sets of persons. Roles exist because of their function within a larger social system. Prescott, Jacox, Collar and Goodwin (1981) state "one factor that inhibits clear and complete conceptual definition is lack of consensus over what constitutes the nurse practitioner role" (p. 223). It is important to explore NP practice settings and practice activities so that inconsistencies in perceptions of the role may be clarified.

The literature reviewed appears to have research-based structure, methodology and data analysis. The conclusions drawn by the researchers appear to be justified by their studies' results however, some make broader generalizations than others. The literature seems to agree that there is a clear place for the advanced practice role of the nurse practitioner, indicating as high as 90% of the populations primary health care needs can be managed by the nurse practitioner (Clawson and Osterweis, 1993). Empirical studies since the beginning of the NP role in the mid-1960's, have shown patient satisfaction with the care

provided by NPs, as well as physician acceptance, cost effectiveness, and the beneficial health outcomes of that care (Hupcey, 1993). To say that the literature has arrived at a defined role of the nurse practitioner may be premature. Health care is dynamic and the provision of health care is multidimensional. Documentation of the domain of practice of the nurse practitioner will always need to be expanded and quantified (Brown & Waybrant, 1988).

This study explores military nurse practitioners practice settings and clinical practice activities in order to describe the role of the military nurse practitioner in the Military Health Care System. In the next chapter, CHAPTER THREE, METHODOLOGY, the methodology used in completing this study will be discussed.

CHAPTER THREE: METHODOLOGY

This chapter describes the methodology of the study: the research design, instrumentation, validity and reliability testing, sampling and protection of human rights. The identified population for this study was military Nurse Practitioners. The variables examined were the practice settings and the clinical practice activities of military Nurse Practitioners.

Research Design

Since the purpose of this study was to describe military NP's practice settings and clinical practice activities, a descriptive study design was implemented. The descriptive design identifies a phenomenon of interest, identifies the variable within the phenomenon, develops operational definitions of the variables, and describes the variables. Accordingly, the description of the variables then leads to an interpretation of the findings and provides knowledge of the variables and the identified population (Burns and Grove, 1993).

The initial steps in conducting this study were to obtain a tool and select the desired sample. The tool was

obtained from Dr. Marilyn Edmunds because of its applicability to the research questions developed.

Once the modified questionnaire was finalized and tested, an Air Force survey number was obtained authorizing its distribution. The questionnaires were mailed to active duty Air Force, Army and Navy NPs whose names and duty locations were obtained from the respective services personnel offices. In an accompanying cover letter, recipients were requested to complete the questionnaire anonymously and return it in a self-addressed, stamped envelop.

Two months time was allowed for the NPs to return the questionnaire. During that time, variables were coded for computerized data entry and analysis. Once the questionnaires were collected and sorted (usable from unusable) the data was entered and analyzed using the Statistical Packages for the Social Sciences (SPSS) program. Descriptive statistics were generated to summarize the data and provide response frequencies, raw percentages, and valid percentages of the total.

Instrumentation

To elicit practice setting and clinical activities information from military NPs a questionnaire was used. The following is information about the instrument provided by Dr. Marilyn Edmunds (1996). The instrument used in this research was originally developed by NP faculty at the University of Maryland. In 1989, the NP clinicians in Maryland were sharply divided about what tasks and procedures were within the scope of practice for NPs. The practice scene in Maryland had long been dominated by graduates of one program that had very high academic and practice standards and clearly defined primary care role behaviors for NPs. The gradual growth in numbers of graduates from other NP programs moving into the area led to reports of developing inconsistency in what NPs were doing in practice.

This climate provided an opportunity to collect data on actual NP practice patterns as well as to validate whether NP curricula at the University was keeping abreast of practice demands. Building on a survey of the literature as well as an evaluation of procedures taught in the NP program, an instrument was developed. Face and content validity were established by a panel of NP educator experts.

The questionnaire was mailed to all individuals listed as NPs by the Board of Nursing (n=630). A test-retest methodology established a 96% reliability.

Fifty percent of the questionnaires (n=315) were returned as undeliverable, documenting the mobility of NPs and the lack of a valid list of NPs. Of the delivered questionnaires there was an 84% response rate. Substantial data was collected which allowed the researchers to obtain a fairly clear practice profile of Maryland NPs.

The questionnaire in this study consisted of two parts. Part I requested demographic information. The first section of Part I addressed age, gender and years worked as an RN, NP and military member. It also included questions about the NP's educational preparation. The second section queried the respondents regarding their clinical practice environment. Items included in this section were percentages of time spent in different activities, the geographic location of the practice, presence of students in the practice, privileges, certification, types of patient seen, and work hours. The third section queried NP's about physician interactions, physician presence in the practice, and the NP's performance evaluation. The final section of Part I allowed for written responses to general questions

about job satisfaction, role changes, and practice restrictions.

In Part II, 87 procedures or activities were listed. The NP's were asked to identify whether they perform the activities and whether they were educated in their NP education program to do so. Additional lines were offered for activities not listed. According to Edmunds (1996) some of the procedures or activities on the questionnaire are not seen as a NP function but were listed in order to help discriminate role behaviors.

Validity and Reliability Testing

Validity Testing

Face Validity, a non-statistical assessment, may be defined as a logical tie between the items of an instrument and its purpose (Lynn, 1985). Face validity was used in this study's application of the questionnaire because of the apparent relevance of the tool and its previous use and accepted results (Edmunds, 1996). The original questionnaire was initially modified to conform to military survey requirements, and its type font was reset. The general question format was unchanged.

Validity of the modified questionnaire was enhanced by an informal review panel of experienced NPs, consisting of

three military NPs (a Navy Pediatric NP, an Air Force Pediatric NP, and an Air Force Womens Health NP) and two civilian Adult NPs. Upon their recommendations regarding the relevance of the content for surveying military NPs, revisions to the original questionnaire were made.

Revisions included changing civilian terms to military terms, e.g. years worked in current organization was changed to years worked in the military. Of the practice settings listed for the military NP to choose from, university, school, county, and state setting choices were eliminated (ineligible beneficiaries of military health care). Federal guidelines govern certain aspects of the provision of health care within the military, so therefore questions about types of patient insurance, and the financial arrangements section (i.e. salary, paid days off, vacation time, wages, taxes) were eliminated. Mass casualty triage was added to the clinical skills listing. See Appendix A for an example of the questionnaire.

Reliability Testing

Reliability is concerned with how consistently the tool or technique measures the concept of interest (Burns and Grove, 1993). The instrument was administered to eight practicing military nurse practitioners (four Air Force and

four Army) on two separate occasions, two weeks apart, to elicit information regarding the consistency or stability of measurement over time. The percent agreement for this tool of 88% provided supporting evidence for test-retest reliability for use of the tool with the military population.

Sample

The target population was active duty nurse officers identified by their respective services (Army, Navy, and Air Force) personnel offices as practicing NPs. A total of 471 names were listed on three separate personnel inventory lists received. This population should be considered an accessible population (the portion of the target population to which the researcher has reasonable access) due to the nature of the military service assignment systems in each of the three services. The sampling criteria were practicing nurse practitioners in the Pediatric, Womens Health, Adult, Family or Primary Care specialties. The sampling plan was to randomly choose equal numbers from each service and each specialty until potential subjects were exhausted. Then, additional participants were drawn from the larger sets in order to increase proportionate representitiveness. In doing so, the sample is a stratified (proportional) sample

of NPs in the military. Stratification ensures all subgroups of the sample will be adequately represented in the sample. Table 1 lists the potential participants from which the actual stratified sample was drawn.

Table 1

Description of Sample by Service Affiliation Identifying Target Population, Stratified Sample, Stratified Samples Percentage of Target Population, and Stratified Samples Percentage of N by Service Affiliation.

Service affiliation	Target population	Stratified sample	% for service	% of N (N=250)
Navy	101	61	60.39%	24.40%
Army	156	66	42.30%	26.40%
Air Force	214	123	57.47%	49.20%
Totals	471	250	53.07%	100%

The number of NPs, by service affiliation, in each specialty, as identified by the lists provided by each service and stratified sample drawn, are listed in Table 2. Participants eliminated from the sample had incomplete addresses, identification as a nurse midwife, clinical specialist, or as a student NP, or had addresses outside the United States.

Table 2

Numbers of Nurse Practitioners by Service Affiliation and by Personnel Office Identified Specialty.

Service affiliation	Specialty			Totals
	Pediatrics	Womens Health	Adult/Family/ Primary Care	
Navy	18 (16)	6 (6)	53 (39)	101 (61)
Army	44 (22)	25 (22)	87 (22)	156 (66)
Air Force	90 (60)	121 (60)	3 (3)	214 (123)
				471 (250)

Note. Stratified sample numbers in parentheses.

Protection of Human Rights

No patient contact was involved. Participant consent was implied when the respondent completed and returned the questionnaire. Participants could withdraw from the study simply by not returning the questionnaire. Likewise, anonymity was preserved by not requesting any identifying information on the questionnaire, and by requesting the respondents not make any similarly identifying marks on the questionnaire.

Summary

Descriptive study designs provide a snapshot view of a particular situation as they naturally occur. One purpose

of the descriptive design is to determine what others in similar situations are doing (Burns and Grove, 1993).

Role Theory supports using a questionnaire as a strategy for studying behavioral roles. A questionnaire is a self-reporting tool design which elicits written responses from the subjects (Burns and Grove, 1993). The questionnaire used in this study was chosen because of its comprehensiveness yet focused questions in regard to obtaining information specific to practice setting and clinical practice activities. The selected sample was stratified in order to allow for the adequate representation of the NP's service affiliation as well as their specialty area. No patient contact was involved and complete anonymity was maintained. Descriptive statistics were used to evaluate the data. Chapter Four presents the data collected in this study.

CHAPTER FOUR: DESCRIPTION OF DATA

The purpose of this study was to describe the practice settings of military nurse practitioners (NP) and their clinical practice activities.

According to Burns and Grove (1993) research design is a "blue print" for conducting a study. There are a variety of designs, one of which is descriptive. Descriptive research explores phenomena in real life situations and is used to generate new knowledge where there is limited or no research (p. 50).

Role Theory (Biddle, 1979) speaks of "mapping behavior into facets" in order to formally measure observed events:

"when we map a variety of behaviors into a facet, we thereby create a distribution consisting of the frequencies of behavioral mappings for each category of the facet. In such a fashion, the facet provides us with an operational measure of how the behaviors in which we are interested stack up against the aspect we have chosen for study" (p. 28).

By describing behavioral facets, which in this study were military NP practice settings and practice activities, theoretical meaning is given to the findings. In turn, this

provides knowledge that can be used for further research. This chapter describes the practice settings and practice activities data collected from the respondents.

A total of 250 questionnaires were mailed. A total of 186 questionnaires were returned (74.4% response rate) within the allotted time period (Six questionnaires arrived after the collection deadline), ten were returned undeliverable. Of the returned questionnaires, four were unusable due to incompleteness of responses and two were unusable because the respondents were not NPs. Because of the anonymity of the questionnaire, those participants who chose not to return the survey could not be identified and it could not be ascertained if the respondents were different from the nonrespondents, relative to the research variables.

The data analysis was grouped into two parts following the questionnaire layout: Part I, descriptions of military NP's practice settings, and Part II, descriptions of military NP's clinical practice activities. No manipulation of the variables was involved.

Nurse Practitioner Practice Setting

Demographics

Table 3 summarizes the demographic data obtained from the military NPs. Of the respondents, 48.2% (n=79) were affiliated with the Air Force, 25% (n=41) with the Army, and 26.3% (n=43) with the Navy. The age of the NPs ranged from 32 to 54 years old. The mean age was 40. The majority of the respondents were female (90.2%, n=147,).

Table 3

Demographics of Military Nurse Practitioners who Participated in the Study.

Demographic variables	N	(%)
Service affiliation:		
Air Force	79	48.2
Army	41	25.0
Navy	43	26.2
Age:		
30-35	29	17.7
36-40	62	37.8
41-45	45	27.5
46-50	21	12.7
over 50	7	4.2
Gender:		
Female	147	90.2
Male	16	9.8

Note. N=Frequency of response; (%)=Valid percent of each variable.

Specific employment history was limited to data indicating years worked as a Registered Nurse (RN), NP and military member. See Table 4. Respondents worked from 1 to 33 years, averaging 14 years, as an RN and have worked from 0.5 years to 25 years as an NP, averaging 6.8 years. No attempt was made to distinguish years working in the NP role separate from that of a RN. Respondents were asked how many years have they worked in the military (enlisted and/or officer). The NP's had been in the military ranging from 1.5 years to 25 years, averaging 13 years.

Table 4

Years Worked as a Registered Nurse, Nurse Practitioner and Military Member.

Work years	RN		NP		Military	
	N	%	N	%	N	%
0-5	13	7.9	89	54.3	14	8.5
5.5-10	32	19.8	36	21.9	32	19.5
10.5-15	47	28.7	26	15.9	50	30.5
15.5-20	47	28.7	7	4.2	52	31.7
20.5-25	15	9.1	6	3.7	16	9.8
25.5-30	7	4.3	0	0	0	0
over 30	3	1.8	0	0	0	0

Note. N=Frequency of response; (%)=Valid percent of each variable.

Education

The general educational background of the military NP is presented in Table 5. The format of the education questions did not allow for clear distinctions between differing levels of education or types of degrees such that the responses could be accurately described. Although a limitation to the descriptive nature of this study, generalities can be identified.

The largest portion of respondents indicated they had a Bachelor's degree (n=143, 87.2%). Sixty-six percent (n=109) of the respondents indicated they had a Masters degree. Two NPs responded they had a Doctorate.

The Air Force and Army currently have their own NP educational training school (certificate programs), the Navy has since discontinued their certificate program. Of the respondents, 51 Air Force (31.1%), 17 Army (10.3%), and 4 Navy (2.4%) identified their NP preparation was completed at the certificate program level.

Practice Environment

The practice environment variables encompassed the largest amount of data. NP's were asked about work schedules, collateral duties, types of facilities, patients and other providers, privileges, and evaluation reports.

Tables 6 through 10 present the specific practice environment variables and data results.

Table 5

Educational Background of Military
Nurse Practitioners

Demographic variables	N	(%)
Education		
Diploma	30	18.3
ADN	14	8.5
BSN	143	87.2
MSN	109	66.5
Doctorate	2	1.2

Note. N=Frequency of response, some respondents gave more than one answer;
(%) = Valid percent of each variable.

The majority of NP respondents (n=143, 87.2%) indicated they worked in a full-time NP role. Three NP's responded that they were not currently working as an NP, but completed the questionnaire based on their previous assignment as a NP (two had been moved into management positions less than one year ago and one had separated from the military eight months prior but had continued in the same position as a civilian NP).

Of the NPs who responded to the question regarding practice specialty, 12.8% (n=21) indicated they were Womens Health NPs, 17.1% (n=28) were Pediatric NPs, 3% (n=5) were Adult NPs and 11% (n=18) were Family NPs. However, 55.5% (n=91) elected not to respond to this question.

Table 6

Practice Environment of Military Nurse Practitioners, Part I.

Practice environment		
variables	N	(%)
Work as an NP		
Full time	143	87.2
Part time	17	10.4
Not working	3	1.8
Specialty		
Womens Health	21	12.8
Pediatrics	28	17.1
Adult	5	3.0
Family	18	11.0
No response	91	55.5

Note. N=Frequency of response; (%)=Valid percent of each variable.

The NP's were asked to estimate what percentage of their time was spent in clinical, administrative, teaching, and research activities. See Table 7. Sixty-one percent

(n=100) of the NPs responded that they spent 76% to 100% of their time in clinical activities. In contrast, 86% (n=142) spent less than 26% in administrative duties and 95% (n=157) spent less than 26% in teaching duties. Likewise, 99.4% (n=163) responded that they spent less than 26% of their time in research activities. Other activities cited by the respondents were telemedicine, utilization management, military-related activities, domestic violence case review, and community service.

Table 7

Practice Environment of Military Nurse Practitioners, Part II.

Duties percent	Clinical		Admini- strative		Teaching		Research		Other	
	N	%	N	%	N	%	N	%	N	%
0-25%	15	9.1	142	86.6	157	95.7	163	99.4	161	98.2
26-50%	11	6.8	10	6.1	6	3.7	0	0	1	.6
51-75%	38	23.8	4	2.4	0	0	0	0	1	.6
76-100%	100	61.0	8	4.9	1	.6	1	.6	1	.6

Note. N=Frequency of response; (%)=Valid percent of each variable; actual research values ranged from .00% to 5.0%.

Because of the format of the questions in this section, not all respondents identified the geographic location distinct from the facility type. See Table 8. The

predominant geographic setting for the NPs who responded (n=31, 18.9%) was suburban. The predominant facility type was the hospital outpatient setting (n=123, 75%). Free-standing clinic was identified as the second most common type facility (n=33, 20%) and teaching hospital was the third most common (n=32, 19.5%). Other locations listed by the respondents were base functions, migrant camps, Flight Surgeons Office, and operational triage sites.

The NP's were asked to indicate whether or not medical students, residents, independent duty technicians, nursing students, or PAs were present in their practice environment. Sixty-four percent (n=105) of the respondents indicated PAs. Forty-six percent (n=76) indicated they had nursing students present, and 29% (n=48) indicated they had other types of students present. The other types of students listed by the respondents were High School ("vo tech"), medical assistant, hospital corpsmen or technicians, nurse practitioner, physicians assistant, nurse midwife, or clinical nurse specialist students.

Of the types of patients seen, 90.9% (n=149) of the NP's indicated they saw female patients, and 60.4% (n=99) cared for male patients. Across the age span, 44.5% (n=73) saw neonates, 60.4% (n=99) saw infants, 62.2% (n= 102) saw

children, 87.8% (n=144) saw adolescents, 59.8% (n=98) saw adults and 44.5% (n=73) saw elderly patients. The average number of patients seen in an eight hour period ranged from 1 to 34, with a mean of 18, and a mode of 20 patients. Only 3 NPs (1.8%) indicated they saw over 30 patients in an eight hour period.

The largest percentage (99.4%, n=163) of the respondents indicated their work schedule was weekday day-time hours. Thirty NP's (18.3%) indicated they work weekday evening hours and three NPs (1.8%) work weekday night-time hours. Fourteen percent (n=24) indicated they work weekend day-time hours, 6.1% (n=10) work weekend evening hours, and 1.8% (n=3) indicated they work weekend night-time hours. Ten percent (n=17) work on-call, and 7.9% (n=13) work holidays. It should be noted that some respondents indicated more than one item.

One hundred percent of the military NPs responded that they had prescriptive authority, where as only 9.1% (n=15) indicated they had a Medical Assistance Prescription Provider number. Ninety-one percent (n=150) responded that they did not have hospital admitting privileges.

Table 8

Practice Environment of Military Nurse
Practitioners, Part III.

Practice environment variables	N	(%)
Geographic setting		
urban	27	16.5
rural	13	7.9
suburban	31	18.9
Facility		
Hospital, Inpatient	20	12.2
Hospital, Outpatient	123	75.0
Teaching Hospital	32	19.5
Home	2	1.2
Free-Standing Clinic	33	20.1
Emergency Department	8	4.9
Acute Care Clinic	23	14.0
Mobile Unit	1	.6
Other	13	7.9
Care Providers		
medical students	55	32.5
independent duty technicians	47	28.7
residents	62	37.8
nursing students	76	46.3
physician assistants	105	64.0
other students	48	29.3

continued

Table 8, continued

Practice environment variables	N	(%)
Types of patients		
Neonates	73	44.5
Infants	99	60.4
Children	102	62.2
Adolescents	144	87.8
Adults	98	59.8
Elderly	73	44.5
Female	149	90.9
Male	99	60.4
Work Schedule		
Week Days	163	99.4
Week Evenings	30	18.3
Week Nights	3	1.8
Weekend Days	24	14.6
Weekend Evenings	10	6.1
Weekend Nights	3	1.8
Holidays	13	7.9
On Call	17	10.4

Note. N=Frequency of response, some respondents gave more than one answer; (%)=Valid percent of each variable.

Choices for identifying the NP's type of certification were ANA, State or Other. Of these choices, 34% (n=56) indicated their certification was from the ANA (American Nurses Association), 30% (n=50) indicated State certification and the majority (64%, n=106) indicated

another type of certification as a NP. Other types of certifications identified by the respondents were American Academy of Nurse Practitioners (AANP) (3.7%, n=6), Association of Women's Health, Obstetric, Gynecologic, and Neonatal Nurses (AWHONN) (3.7%, n=6), National Association of Pediatric Nurse Associates and Nurse Practitioners (NAPNAP) (19.5%, n=32), and National Certification Board of Pediatric Nurse Practitioners (NBPNP) (7.9%, n=13). Although not identified as ANA certification, 18.9% (n=31) responded that their "other certification" was American Nurses Credentialing Center (ANCC), which is an ANA certifying subsidiary. Combined ANA and ANCC responses are 52.9% (n=87). Likewise, NAPNAP and NBPNP certifying bodies were identified separately and are actually the same. Their combined responses are 27% (n=45).

Fifty-eight percent (n=96) of the NPs responded that their institution provided NP liability insurance. No differentiation was made as to type of institution, i.e., hospital versus federal government. Additionally, 3.0% (n=5) indicated that they had self-purchased NP liability insurance. None of the respondents indicated they had both institution-provided and self-purchased NP liability insurance.

The NPs were asked to indicate whether the assignment of patients to their care was random, a special panel, all patients, only referred patients, or pre-surgical or admission exams. Some respondents identified more than one type of patient assignment. The majority of NP's (n=119, 72.6%) had random assignment of patients. Forty percent (n=66) saw only a special panel of patients and 7% (n=12) saw patients only on referral. Fourteen percent (n=23) of the NPs completed pre-surgical or admission exams.

Each military service has service-specific guidelines that dictate when evaluation reports are written. Each medical treatment facility may or may not dictate who does the evaluating. For this reason, it was not pursued as to how evaluators are determined. Seventy-three percent (n=121) of the NP's indicated that a physician writes their evaluation report, 42% (n=69) indicated nurse administrator, 11% (n=18) indicated Nurse Practitioner. Ten percent (n=17) indicated some other person than those listed wrote their evaluation. The other types of evaluators identified by the respondents were the hospital commander, the hospital

Table 9

Practice Environment of Military Nurse
Practitioners, Part IV.

Practice setting variables	"Yes"	
	N	(%)
Prescriptive authority	164	100.0
Hospital admitting privileges	5	3.0
Medical Assist. Rx number	15	9.1
Certification as an NP		
ANA	56	34.1
State	50	30.5
Other	106	64.6
NP liability insurance		
Institution-provided	96	58.5
Self-purchased	5	3.0
Both	0	0
Assignment of patients		
Random	119	72.6
Special panel	66	40.2
All patients	91	55.5
Only patients on referral	12	7.3
Pre-surgery or admissions	23	14.0

Note. N=Frequency of response; (%)=Valid percent of each variable.

administrator, a Nurse Midwife and the Medical Operations Squadron Commander. Of the 164 respondents, 71.3% (n=117) stated they had input into their evaluation and 8.5% (n=14) stated they did not.

Table 10

Practice Environment of Military Nurse Practitioners, Part V.

Practice environment variables	N	(%)
Evaluation Report written by ^a		
physician	121	73.8
NP	18	11.0
nursing administrator	69	42.1
not evaluated	0	0
Other	17	10.4
Input into Evaluation Report		
Yes	117	71.3
No	14	8.5

Note. N=Frequency of responses; (%)=Valid percent of each variable; ^aSome respondents identified more than one answer.

Physician Interaction

As can be seen in Table 11, the physician interaction variables were physician availability, physician discussions, and physician co-signature. Respondents were

instructed to identify all the options that applied to their particular practice setting. Therefore, the response options are not exclusive of one another, i.e., the NP may have a physician on site, as well as available by telephone. Seventy-two percent (n=118) identified always having a physician available on site, 34.8% (n=57) were available by telephone. Having a physician regularly on site was identified by 46 NPs (28%), only 3 NP's (1.8%) responded that a physician was not available much of the time.

Consistently the NP's responded that they conversed with physicians about patient care. The largest group (n=160, 97%) reported discussing management. Therapeutics was discussed by 93.9% (n=154) of the NP's and 92.1% (n=151) discussed diagnosis with a physician. When asked how often they had a discussion with a physician 63.4% (n=104) indicated they did so whenever needed, on a regular basis. Thirty-two percent (n=54) replied they discussed whenever needed on an irregular basis. Only one NP responded to not discussing with a physician at all, and one responded to discussing after every patient.

Responses to physician co-signature to either charts, order, or prescriptions was low. Six percent (n=11) of the respondents indicated a physician co-signed their patient

records. Three NP's (1.8%) indicated the physician co-signed their prescriptions and 4 (2.4%) indicated a physician co-signed their orders.

General Comments

The general comments section of the Practice Setting part of the questionnaire was formatted such that the NP could select an option as well as make a written comment if so desired. Table 12 outlines the descriptive data from the general comments section.

When asked whether or not they would be interested in working in a NP-managed practice, 55.2% (n=90) responded they would on a full-time basis. Eleven percent (n=18) responded that they were not interested at all in working in a NP-managed clinic.

The NP's were asked "if you had to do it over again, would you: Become a nurse?, Become a NP?". Seventy percent (n=115) of the respondents indicated they would become a nurse again. A theme of those who commented as to why they would not pursue a nursing career was lack of standardization of the role and failure of nursing to

Table 11

Physician Interaction with Military Nurse Practitioners.

Physician interaction variables	N	(%)
Physician Availability		
Always on site	118	72.0
Available by telephone	57	34.8
Regularly available on site	46	28.0
Backup Available	29	17.7
Available not much of the time	3	1.8
Discussions with a physician		
Diagnosis	151	92.1
Therapeutics	154	93.9
Management	160	97.6
How Often		
After Every Patient	1	.6
Every Day	5	3.0
Every Week	19	11.6
Every Month	0	0
Whenever Needed on a		
Regular Basis	104	63.4
Irregular Basis	54	32.9
No Discussions	1	.6
Physician co-Signature		
Charts	11	6.7
Orders	4	2.4
Prescriptions	3	1.8

Note. N=Frequency of response; (%)=Valid percent of each variable.

advance as a whole. Another commented "the personal health risk has become too dangerous" and yet another stated the liability from poor manning support was too great. Ninety percent (n=148) of the respondents indicated they would become a NP again. The reasons for not pursuing the NP role again were lack of leadership and poor chance for promotion.

From a list of 15 possible items NP's were asked to rank the top 3 reasons they stay in the NP role. Although every item was identified by more than one NP, the majority (52.8%, n=86) indicated independence as one of their 3 reasons for staying on the job. The second most selected option (46.6%, n=76) was the types of patients seen. The third most often selected item (39.3%, n=64) was that of responsibility. Other items gaining a greater than 20% response rate were security, salary, benefits, and importance of work. See the questionnaire in Appendix A for the complete listing of all possible options.

The NP's were given the option to write in comments about any NP role problems, changes since their graduation, events that would lead them to leave their employer (the military) and to identify any regulations they felt restricted their NP practice.

Several NP's expressed concern about the role of the NP in the military. Concerns expressed were: NP's are deployed as nurses and not as care providers, the military's perception that the NP and PA are the same, that the NP is a physician-substitute when E.R. coverage is needed. One comment was "inappropriate input from a senior nursing officer who believes the NP role is inappropriate for a nurse." Another stated that the perception of the scope of practice of NP's by physicians was restricting. Two NP's expressed they would leave the military if the opportunity to do research and obtain a doctorate degree presented itself. Other stated reasons for leaving the military were: relocation from their current station, inability to continue career progression, personal/family life conflicts, loss of autonomy or loss of the NP role in the military, and lack of competitive pay with civilian NPs or PA's receiving specialty pay (and NPs not). The most frequently cited restriction the NP's identified was restricted prescriptive authority.

Nurse Practitioner Clinical Practice Activities

The second part of the questionnaire listed 87 different types of procedures or activities from which the

Table 12

General Comments Items Selected by Military
Nurse Practitioners.

General comments variables	N	(%)
Work in NP-managed practice		
Full time	90	55.2
Part time	46	28.2
Not at all	18	11.0
"Do it over again"		
Become a nurse--"yes"	115	70.5
Become a NP--"yes"	148	90.8
Reasons you stay in your job		
type of patients	76	46.6
geographic location	12	7.4
security	33	20.2
responsibility	64	39.3
salary	47	28.8
low malpractice rate	11	6.7
relations with others	32	19.6
benefits	37	22.7
importance of work	58	35.6
resources to do the job	8	4.9
specific people	5	3.1
independence	86	52.8
hours	31	19.0
recognition	11	6.7
military health care model	24	14.7

Note. N=Frequency of response; (%)=Valid percent

of each variable.

NP's were to select. They were asked to identify which of the items they were taught in their NP academic program and which they currently perform in their practice. Fourteen NPs did not complete this section of the questionnaire, lowering the sample to n=150. Table B1 (see Appendix B) lists the practice activities and descriptive data. The number and percentages cited are totals for each practice activity. Response options of "taught but not perform," "perform but not taught," "taught and perform" and "neither taught or perform" are mutually exclusive. Because of its lengthiness, the number of items listed, this discussion will be limited to describing the most frequently identified items.

The items that more than 100 of the 150 respondents identified as a practice activity in which they were taught and perform, were (in descending order of frequency): complete histories, complete physicals, writing prescriptions, breast examinations, interpret lab work, patient instruction, vital signs evaluation, consultation with physician, episodic care, rectal exams, height/weight evaluation, and family instruction. Only one item was identified by more than 100 NP's as an activity they

performed without having received instruction, and that was talking with a pharmaceutical representative.

The items that more than 100 of the respondents identified as neither being taught nor performed in their clinical practice were: pre-surgical physicals, pulmonary function testing, audiometry, dilating pupils, excision of foreign bodies, suturing, ear piercing, gastric lavage, bone marrow aspirations, thoracentesis, lumbar puncture, pacemaker wire removal, dental exams, colposcopy, sigmoidoscopy, intubation, management of a budget, ordering medications from suppliers, assisting with surgery, tracheobronchial suctioning, casting, splinting, taking X-rays, billing, and performing minor surgery.

Items that greater than 75 but less than 100 of the respondents identified as practice activities were (in descending order of frequency): consultation with NP's, staff inservice, hernia exams, mass casualty triage, nutrition counseling, pelvic exams, pap smears, school physicals, testicular examination, consultation with nurse, throat cultures, and vision screening. Table B2 in Appendix B lists the activities reordered from most frequently to least frequently identified activity. The numbers cited are

totals of the response options "Taught and Perform" and "Perform but not Taught".

Only one NP responded that patient instruction was not an activity performed and only one NP responded that consultation with a physician was not done. None of the respondents identified writing prescriptions as an activity that was neither taught or done.

The mass casualty triage item was added to the original questionnaire because of its relevance to military operational activities. Of the respondents, 57.3% (n=86) indicated they perform the activity, but were not taught it, 10.7% (n=16) indicated they were taught and perform it, and 30% (n=45) indicated they were not taught nor do they perform mass casualty triage.

Four blank lines were added to the bottom of the list of 87 items in order to allow the NP's the opportunity to add any activities not listed. A total of 32 activities were added that the NP's felt were distinctly different enough from those listed. Table 13 lists these activities and the frequency that they were identified.

Table 13

Clinical Practice Activities Added by Nurse
Practitioner Respondents.

Written-in activity	N	Written-in activity	N
Geriatric assessments	3	Networking	1
Hystosalpingograms	2	Well baby exams	2
Vulvar biopsies	12	Perinatal care	6
Utilization management	2	Contracting	2
Infertility work-ups	5	Tricare	1
Norplant insert/remove	7	Prevention program	1
IUD removal	2	Counsel, Family Plan.	3
Diabetic teaching	1	Health education	1
Cryosurgery	3	Nebulizer treatments	3
Endometrial biopsies	16	Ear curettage	2
Violence case review	1	Paracervical blocks	1
Obstet. ultrasounds	4	Lactation education	2
Rape/Assault forensics	1	Inpatient consulting	3
Central line access	1	Supervising	1
Wet preps	4	Community assessment	1
Cervical biopsies	7	Tympanograms	1

Note. N=Frequency of response.

Summary

Role Theory employs the term *facet* in place of variable. According to Biddle (1979), facets consist of a set of nominal alternatives, ordered categories, ratio scales, and/or absence versus presence categories. "Those

interested in studying the behaviors that appear in a new context often begin by seeking to apply to them facets that had been found useful in other contexts" (p. 29).

The variables employed in Part I of the study's questionnaire elicited data pertaining to the military NP's demographics, educational background, practice environment, physician interactions, and allowed for written comment. Part II queried the NPs about clinical practice activities by listing 87 items from which to choose from and allowed for four add-in activities as well. A description of the data was presented identifying the frequency of responses and their percentage of the total in each of the identified categories. Because this was a descriptive study, no manipulation of the data, or correlational analyses were made.

According to Burns and Grove (1993), "The relationship among variables are identified to obtain an overall picture of the phenomenon being examined, but examination of types and degrees of relationships are not the primary purpose of descriptive study" (p. 293).

The final chapter will discuss the data, making comparisons with other studies of NP practice settings and practice activities. Final recommendations are also made.

CHAPTER FIVE: DISCUSSION

Content Discussion

The purpose of this study was to describe the practice settings of military nurse practitioners (NP) and their clinical practice activities.

Demographics

The overall questionnaire response rate was 74%. According to Burns and Grove (1993, p. 373), the response rate to questionnaires is lower than other forms of self-report. They state that the response rate is usually even smaller (25%-30%) for mailed questionnaires, which in turn makes it difficult to obtain a representative sample. Interestingly, the percentage of respondents from each of the three services closely matched that of the stratified sample. Of the 250 mailed questionnaires, 24% were Navy, 26% Army, and 49% were Air Force (see Table 1). Of the responses, 26% were Navy, 25% Army, and 48% were Air Force.

The military NP's average age was 40. Ward (1979) sampled NPs across the United States and found 23% of the NPs (n=77) were age 26-30 years old and 20% were age 31-35 years old. Wilbur et al. (1990) found 61% of their sample (n=96) aged between 30 and 39 years old. Hupcey (1993)

found the mean age of NPs in the state of Pennsylvania was 40, +/-8 years. None of the responding military NPs were less than 30 years old and only 7 were greater than 50 years old. It appears that military NPs are generationally equivalent to civilian NPs. Like other studies by Hupcey (1990, 1993), Ward (1979), Wilbur et. al. (1990), Lynaugh, Gerrity and Hagopian (1985), and Vacek and Ashikaga (1980) greater than 90% of practicing NPs are female.

The military NP averaged 6.8 years as a Nurse Practitioner. Hupcey (1990, 1993) had similar findings of 1-15 years, +/-5 years, averaging 6 years.

Education

Eighty-seven percent of the military NPs indicated they had a bachelors degree, 66% held a masters degree, and 1.2% held a doctorate. In comparison, Ward (1979) found 29% had bachelors degrees and 28% had masters. Wilbur et al. (1990) found 16% of the surveyed NPs were doctorally prepared, 82% held a masters. However, this may be a function of the selected sample (68% living in Illinois). Hupcey (1993) found 15% of the Pennsylvania NP's held a bachelors, and 64% held a masters degree. It may be surmised then, that in the military, or at least among military NPs, higher levels of education are similarly predominant.

Practice Environment

The general practice environment of the military NP did not appear to differ greatly from civilian NPs. The military NPs indicated they spent the majority of their time primarily in clinical duties. Lynaugh et al. (1985) found Pennsylvania NPs spend 72% of their time in direct patient care. Hupcey (1990) found larger groups teaching (23%) and researching (59%). However, this may be a function of the study sample of masters prepared NPs. Sultz et. al. (1984) found in 1974 77.5% and in 1982 74.2% of the NPs were employed in a primary care function.

The number of patients seen by the military NP in an eight hour period ranged from 1 to 34, a mean of 18. Lynaugh et. al. (1985) found NPs seeing an average of 11.4 patients per day. Sultz et. al. (1984) found the percentage of NPs who saw more than 10 patients per day increased from 55% in 1974 to 59% in 1982. He also found Master's prepared NPs seeing fewer patients than certificate program graduates. Levine, Orr, Sheatsley, Lohr and Brodie (1978) also found an average of 11.6 patient encounters per day by NP graduates of the University of Virginia. Without further research, one can only speculate why military NPs appear to see more patients, on the average, than their civilian

counterparts. Perhaps the patient-to-provider ratio is higher because patients have limited eligibility to seek care elsewhere, i.e., civilian providers.

Overall, the age span of types of patients seen were remarkably balanced from neonates to the elderly (see Table 6). The number of NPs who indicated they saw adolescents occurred more frequently than other age groups. Perhaps this is a function of crossover of Pediatric, Womens Health and Family NP scopes of practice.

The geographic setting and type of facility that each military NP practices within had limitations inherent to the military health care system. In presenting the related data, it must be understood that the NPs may or may not have had a choice in selecting their duty location. This limits its comparison to civilian NP locations. Further research would need to be accomplished to identify the significance of a rural setting versus an urban setting in the practice environment of the military NP. A large treatment facility being geographically located within a suburban population, or a large retirement population accessing care at a relatively small facility are examples of this geographic gray area.

The type of facility most often identified by the NPs was an outpatient, hospital-facility setting. This is consistent with studies by Lynaugh et. al. (1985), Hupcey (1993), and Forbes, Rafson, Spross and Kozlowski (1990). Wilbur et. al. (1990) also identified the hospital outpatient clinic setting, second only to schools of nursing. A consistently cited type of facility for civilian NPs was a physicians office. In the military however, the only facility type remotely similar to that is the free-standing clinic. Thirty-three military NPs identified this facility type.

The overwhelming majority of military NPs responded that they worked a weekday day-time hours work schedule. The remaining work-schedule options were evenly distributed. Interestingly however, of those who indicated they pulled call, they stated the call was for nursing supervisory duties and not NP clinical activities.

One hundred percent of the military NP respondents indicated they had prescriptive privileges. However, in the general comments section several NPs commented that their prescriptive authority was restrictive. The only NP to describe the nature of the restriction was that the NP's prescriptions could not be filled outside of the military

facility, i.e. at a civilian pharmacy. An understanding of the distinctions between state practice acts and federal regulations may explain the perceived restriction. It is not inconceivable for military NPs to obtain licensure in the state in which their military facility is located. Having state licensure then, may broaden their prescriptive privileges (given the particular state allows NP prescriptive authority).

Military NPs were divided in regards to certification. Clearly the format of the question did not make the selections mutually exclusive (a total of 212 "yes" responses were counted). Looking at each certification type separately, the number of military NPs falls below the civilian rate of 78% (Wilbur, 1990). In order to expound upon data from the "other" types of certification cited by the military NPs, their specialty of practice needs to be known. This is yet perhaps, another starting point for further research.

The response rate of 3% (n=5) of the NPs having self-purchased liability insurance is not alarming when consideration is given that military NPs practice under military oversight. The Federal Torte Claims Act provides for nurses employed by the federal government a broad level

of immunity from work-related liability issues (Aiken & Catalano, 1994). It should be noted however, the military NP is held liable for care provided and the degree of federal protection has its limitations.

Each military service has guidelines that govern the frequency that its officers are evaluated; however the actual evaluator may not be governed. Military NP's responded that the majority of them were evaluated by physicians. The next most frequently identified type of evaluator was a nurse administrator. The relatively low number of nurse practitioner evaluators is interesting to consider, in light of the comments written by the NPs in the general comments section. Several NPs expressed concern about the physicians lack of understanding of the NP's role, and one expressed concern with the senior nurse administrators lack of agreement that the NP role is an appropriate role for a nurse at all. Although more than two-thirds of the NPs indicated they have input into their evaluation, perhaps a closer look into NP evaluators, rating scores, and subsequent promotion is warranted.

Physician Interaction

Military NP's response to physician availability on site was double that cited by Sultz et. al. (1984). The

number identified as being available by phone was nearly the same however. Sultz et. al. asserts that the results indicate an "increasing confidence" in NPs. The higher military NP number may be a function of the type of facility in which the military NP is practicing as compared to the civilian NP.

It is apparent from the number of physician interaction responses that military NPs practice collaboratively with physicians. Physician interaction scores were considerably higher than those found by Lynaugh et. al. (1985). Booth (1981) states "collaboration is essential since no one provider can practice effectively in isolation" (p. 112).

General Comments

In the general comments section of the practice setting part of the questionnaire, NP responses paralleled their civilian counterparts. Like the military NP's, civilian NPs cite lack of physician support, misunderstood role, restrictions on prescriptive authority, under-utilization of NP skills and family responsibilities as hindrances to the job and/or reasons to leave their employer (Lynaugh et. al., 1985, Hupcey, 1993, Wilbur et. al., 1990).

Reasons to stay in the role were similarly matched. Wilbur et. al. (1990) states jobs were chosen primarily for

good salary, role autonomy, and location. Positive factors influencing NP role performance were identified by Hupcey (1993) as support by physicians, independence in the work setting, and patient appreciation. Among the fifteen listed reasons to stay, the military NPs responses of security, responsibility, salary, relations with others, benefits, and importance of work were evenly distributed. Independence and types of patients were ranked highest.

Practice Activities

The clinical practice activities of the military nurse practitioners had varying degrees of frequency of response. By grouping frequently performed tasks, dominant aspects of the military NPs practice activities may be determined (see Table 13). Granted, direct observation of practice activities may have yielded a more reliable, less biased, list of activities than reported.

According to Fitzgerald et. al. (1995), NP's primarily focus on coordinated, ongoing care "designed to maintain health while managing common acute and chronic illness and life stressors" (p. 22). It is not surprising then, to find patient instruction, consultation with physician and writing prescriptions as the top most frequently performed NP clinical practice activities. Completing histories,

physicals (complete and episodic), evaluating lab work, vital signs, height and weight status, performing throat cultures, breast and rectal exams, counseling patient and family, and providing several levels of teaching (formal lecture to developing teaching materials) all fall within the general management of common acute and chronic illnesses described above. These items were all identified by the military NPs as clinical practice activities more frequently than any of the other listed items.

Two NPs responded they did not perform complete physicals. However, since episodic care was also a selection item, it may be asserted that these NPs perform more limited or focused exams.

In an earlier study of task performance by nurse practitioners (conducted in 1974), Levine et. al. (1978) found that 65% of the NPs ordered roentgenograms whereas only 7% interpreted the results. In contrast, 59.3% of the military NP's reported interpreting X-rays as a clinical practice activity. The significant difference in the numbers may need to be tempered however, by considering 24 years of role development. In 1974 and 1996 completing histories and physicals scored highest in frequency of performed activities. By using the Levine et. al. 1974

study as an indicator of change, writing prescriptions has increased from 32.7% (for chronic illness) in 1974 to 98.7% in 1996 (as indicated by the military NP response frequency).

Fitzgerald et. al. (1995) state "some doctors fear having their role usurped. But zero-sum thinking--your win is my loss--can be counterproductive in today's environment. There is more than enough work for primary care providers to go around" (p. 20). It is apparent from the frequency of responses that sharing of the workload is a possible scenario in the military health care system. That is, the least frequently indicated activities performed by the military NPs were: sigmoidoscopies, thoracentesis, bone marrow aspiration, and lumbar punctures. Casting, assisting with surgery, gastric lavage, performing minor surgery were similarly less frequently indicated. Many of the activities the NPs said they are doing are those activities commonly performed by registered nurses already: giving injections, ear irrigations, wound/dressing evaluation, suture removal, applying ace bandages, IV catheterizations, artificial respirations, and phlebotomy.

Fitzgerald et. al. (1995) addresses the benefit of mid-level providers to the physician practice. They state that

NPs and PAs can do 80% of what the physician does, freeing the physician to do "more remunerative tasks" (p. 21).

In summary, the practice settings and clinical practice activities discussed herein, although comparable in many areas, are generalizable to military nurse practitioners alone. The descriptive data provided is a sample of the larger military NP population. It is a superficial presentation of a more complex phenomenon, yet allows for a clearer understanding of the practice profile of military nurse practitioners. Further research, beyond the descriptive design, is certainly warranted.

Further Research and Recommendations

Inherent in any descriptive research is the opportunity for more research. This study was designed to describe military NP practice settings and clinical practice activities without manipulation of the data.

Role Theory states that the best way to study behaviors is to observe the characteristic behaviors of a person as they cope with real-world problems and contexts. However, human behaviors are emitted at a pace that exceeds our ability to note them. As well, each behavior is a "bundle of complex bits of information," judged from an "endless array of conceptual viewpoints" (Biddle, 1979, p. 79).

Therefore, studying behavioral roles is not limited to direct observation. Obtaining data may also be accomplished within a laboratory context, or by conducting an interview or administering a questionnaire.

Further correlational types of studies might clarify the military NPs practice environment related to urban or rural settings, types of facilities, and types of patients seen.

An entirely separate questionnaire specifically designed to elicit levels of education and types of degrees, might bring into light a more detailed description of that data. Because of the length of the questionnaire as it stood for this study (four pages), any additions made to it may adversely affect the respondents completion rate, and thus skew the data.

Perhaps a type of time-in-motion study may provide a more specific delineation of the NPs collateral duties. A third party observer may be able to note more accurate percentages of clinical, teaching, administrative, and research activities of the NPs than identified by the NPs themselves.

In future studies of NP certification, more useful data would probably be gained by listing the individual types of

certification exams possible. NPs may be more likely to identify their specific certifying agency if recognized from a list, rather than to identify it as "ANA", "State", or "Other". Further research into the certification process itself may reveal the advantages or disadvantages of one certifying body for NPs, with secondary specialty certification.

Most certainly an interesting research problem to pursue would be the NP evaluation process. A prospective (or retrospective) study of NP evaluators, recommendations, and promotion opportunities may substantiate (or not) the concerns expressed by the NPs about career progression.

The description of the data from the general comments section in this study was limited to what each responding NP wrote. Qualification, amplification, verification of the comments was impossible. Therefore, qualitative types of research may confer clearer descriptions of the NP role concerns, perceived restrictions, and job satisfaction or dissatisfaction. The physician interactions segment of the questionnaire could be reformatted and distributed to physicians whose practices employ NPs. Corroborative data from physicians would certainly lend credence to the concept of collaborative practice.

Direct-observation of NP clinical activities may provide a broader list of activities. Similarly, it may provide data related to the frequency in which the NPs accomplish the various activities identified in this study. Most certainly further research should be accomplished before any conclusions can be drawn about the educational preparation of the nurse practitioners to perform the various activities identified. NP academic programs should prepare NPs for entry level practice. Additional skills needed for specific care in each the NP specialties are far too diverse, as indicated by the number of responses the military NPs added to the 87 listed activities. Conducting correlational studies of levels of NP education, types of academic preparation and clinical practice activities may provide insight into NP role requirements. Likewise, skill credibility may be substantiated or not.

It is recommended, in particular to using the questionnaire again, that the format be broken apart into several different questionnaires. The length of the questionnaire may fatigue some responders. The brevity of the questions allows for misinterpretation of the desired data. If a comprehensive analysis of practice settings and practice activities is desired in one questionnaire, then

additional research time should be planned so that follow-up letters to non-responders can be accomplished. Changing the reporting system to confidential (versus anonymous) may allow for follow-up of incomplete responses or clarification of written-in responses.

Implications for Nurse Practitioners

As nurses prepared themselves to be care providers they advanced the provision of needed health care, furthered their own educational stance and broadened their scope of practice. Yet the broader scope of practice changed the norm, the role of the traditional nurse, such that considerable debate about the advanced practice role flourishes.

Biddle's (1979) Role Theory suggests that in a well-ordered social system role integration can exist. However, malintegration (role conflict) may occur when different roles find their duties overlapping. These overlapping roles are functionally interrelated, yet lack adequate communication and so compete against one another for resources and authority. The antonym of role conflict is consensus (p. 77). Conditions of consensus are associated with higher group productivity, cohesiveness and morale (p. 191). So then, it would behoove nurse practitioners to

consider this theoretical integration and to strengthen their collaborative behavior, or interactions, with other health care providers.

Garland and Marchione (1982) contend that because the educational processes of NPs and physicians seldom cross paths, each "lacks adequate information regarding assumptions underlying the role of the other" (p. 26). They say "documentation of empirical patterns leads to the development of abstract generalizations, which in turn suggest more fruitful avenues for empirical study " (p. 23). By documenting exactly what NPs do or do not do, a less ambiguous picture of the role may develop. Nurse Practitioners must take on a substantial amount of initiative, self-reliance and personal assertiveness in order to bring about this much needed enlightenment.

The literature supports the competence of NPs managing predictable health problems, supporting their use as a means of reducing medical care expenditures and freeing physicians to focus on more serious and complex medical care problems (Sirles, et.al., 1986). Nurse Practitioners, military and civilian, could benefit from further descriptive and correlational studies of the NP role. Public and professional awareness of the utilization, capabilities and

scope of practice of NPs can only serve to improve the acceptance of the nurse practitioner role in the future's health care system.

No hypothesis was proven in this study; information was gathered that may provide a starting point for further research. So what if military nurse practitioners practice settings and practice activities are similar to their civilian counterparts? The military health care system evaluates its provision of care using civilian evaluation processes and civilian standards of care. Certainly then, the corroborating data supports the continued use of NPs within the military health care system.

APPENDIX A: NURSE PRACTITIONER QUESTIONNAIRE

NURSE PRACTITIONER QUESTIONNAIRE

USAFSCN95-95

PART I: DEMOGRAPHIC DATA

Age: _____ Years worked as an RN: _____
Gender: _____ Years worked as an NP: _____
Years worked in the military: _____ Career (if any) before becoming an RN: _____
Service affiliation: USAF _____, USA _____, USN _____

Education:

Past education (complete the year for all those that apply and specify type if other than nursing):

1. Diploma: _____; other than nursing: _____
2. ADN: _____; other than nursing: _____
3. BSN: _____; other than nursing: _____
4. MSN: _____; other than nursing: _____
5. Doctorate: _____; other than nursing: _____

Nurse Practitioner Education:

1. Continuing Education: Institution: _____; year: _____
2. Certificate Program: Institution: _____; year: _____
3. BS program: Institution: _____; year: _____
4. MS program: Institution: _____; year: _____
5. Other: _____ Institution: _____; year: _____

Current Clinical Practice:

1. Do you work as an NP full time: _____ or part time: _____; Specialty: _____
Not working as an NP: _____
2. What percentage of your practice is:
Clinical: _____
Administration: _____
Teaching: _____
Research: _____
Other: _____; please identify: _____
Total 100%
3. Check all the items below which describe your practice setting:

<input type="checkbox"/> urban	<input type="checkbox"/> home
<input type="checkbox"/> rural	<input type="checkbox"/> free-standing clinic
<input type="checkbox"/> suburban	<input type="checkbox"/> Emergency department
<input type="checkbox"/> hospital, inpatient	<input type="checkbox"/> acute care clinic
<input type="checkbox"/> hospital, outpatient	<input type="checkbox"/> mobile unit
<input type="checkbox"/> teaching hospital	<input type="checkbox"/> Other: _____

4. Does your practice environment have any of the following (check all that apply):

<input type="checkbox"/> medical students	<input type="checkbox"/> independent duty technicians
<input type="checkbox"/> residents	<input type="checkbox"/> nursing students
<input type="checkbox"/> physician assistants	<input type="checkbox"/> other students: _____

5. For your practice setting, do you have (circle appropriate answer):

prescriptive authority	YES	NO	NA
hospital admitting privileges	YES	NO	NA
Medical Assistance Rx provider number	YES	NO	NA

6. For your practice setting, do you have (circle appropriate answer):

ANA certification as an NP	YES	NO	NA
State certification as an NP	YES	NO	NA
Other certification as an NP: _____	YES	NO	NA

NP liability insurance

institution-provided	YES	NO	NA
self-purchased	YES	NO	NA
both	YES	NO	NA

Random assignment of patients	YES	NO	NA
Special panel of patients	YES	NO	NA
See all patients	YES	NO	NA
See only patients on referral	YES	NO	NA
Pre-surgery or admission exams	YES	NO	NA

7. Types of patients seen are (check all that apply):

<input type="checkbox"/> neonates	<input type="checkbox"/> children	<input type="checkbox"/> adults	<input type="checkbox"/> male
<input type="checkbox"/> infants	<input type="checkbox"/> adolescents	<input type="checkbox"/> elderly	<input type="checkbox"/> female

8. Average number of patients seen per eight (8) hour period: _____

9. Do you work (check all that apply):

<input type="checkbox"/> week days	<input type="checkbox"/> weekend days	<input type="checkbox"/> holidays
<input type="checkbox"/> week evenings	<input type="checkbox"/> weekend evenings	<input type="checkbox"/> on call
<input type="checkbox"/> week nights	<input type="checkbox"/> weekend nights	<input type="checkbox"/> Other: _____

NP and Physician relationship (check all that apply):

1. Availability of physician on site:

<input type="checkbox"/> always on site
<input type="checkbox"/> available by telephone
<input type="checkbox"/> regularly available on site
<input type="checkbox"/> backup available
<input type="checkbox"/> backup or physician not available much of the time

2. Do you discuss with a physician (check all that apply):

<input type="checkbox"/> diagnosis
<input type="checkbox"/> therapeutics
<input type="checkbox"/> management

3. How often do you discuss with a physician:
- | | |
|--|--|
| <input type="checkbox"/> after every patient | <input type="checkbox"/> whenever needed on a regular basis |
| <input type="checkbox"/> every day | <input type="checkbox"/> whenever needed on an irregular basis |
| <input type="checkbox"/> every week | <input type="checkbox"/> do not discuss these with physician |
| <input type="checkbox"/> every month | <input type="checkbox"/> other: _____ |

4. Does a physician co-sign your:
- | | | | |
|---------------|-----|----|----|
| charts | YES | NO | NA |
| orders | YES | NO | NA |
| prescriptions | YES | NO | NA |

Who writes your evaluation report (check all that apply):

- ☐ physician
☐ NP
☐ nursing administrator
☐ not evaluated
☐ Other: _____

Do you have input into the criteria to evaluate you: YES NO NA

General Comments:

- Would you be interested in working in a NP-managed practice?
☐ Full time; ☐ Part time; ☐ Not at all
- Has the nursing shortage had any impact on your practice? If so, describe:

- Many NPs express concern about the NP role. Do you see any problems with your role as an NP?
 If so, describe: _____
- Do you feel there have been any changes in the NP role since your graduation?
 If so, describe: _____
- If you had to do it over again, would you:
 become a nurse: Yes No Why? _____
 become a NP: Yes No Why? _____
- Rank the top three (3) reasons you stay in your job:

<input type="checkbox"/> type of patients	<input type="checkbox"/> geographic location	<input type="checkbox"/> security
<input type="checkbox"/> responsibility	<input type="checkbox"/> salary	<input type="checkbox"/> low malpractice rate
<input type="checkbox"/> relations with others	<input type="checkbox"/> benefits	<input type="checkbox"/> importance of work
<input type="checkbox"/> resources to do the job	<input type="checkbox"/> specific people	<input type="checkbox"/> independence
<input type="checkbox"/> hours	<input type="checkbox"/> recognition	<input type="checkbox"/> military health care model
- What is the one thing that would cause you to leave your present employer?

- Please list any local or state laws, or military regulations that you feel restrict your NP practice:

PART II: SKILLS ACQUISITION

This section lists the types of procedures and activities nurse practitioners may perform in their practice settings. The list is long, but not complete. Please add any items that reflect your individual practice. Place a check in the "A" box beside all the activities that you were **taught** to do in your NP academic program, and place a check in the "B" box beside all the activities that you currently **perform** in your practice:

A	B		A	B	
taught	perform		taught	perform	
<input type="checkbox"/>	<input type="checkbox"/>	complete histories	<input type="checkbox"/>	<input type="checkbox"/>	interpret ECG's
<input type="checkbox"/>	<input type="checkbox"/>	complete physicals	<input type="checkbox"/>	<input type="checkbox"/>	telephone triage
<input type="checkbox"/>	<input type="checkbox"/>	presurgery physicals	<input type="checkbox"/>	<input type="checkbox"/>	teach in class setting
<input type="checkbox"/>	<input type="checkbox"/>	employment physicals	<input type="checkbox"/>	<input type="checkbox"/>	patient instruction
<input type="checkbox"/>	<input type="checkbox"/>	school physicals	<input type="checkbox"/>	<input type="checkbox"/>	family instruction
<input type="checkbox"/>	<input type="checkbox"/>	episodic care	<input type="checkbox"/>	<input type="checkbox"/>	staff inservice
<input type="checkbox"/>	<input type="checkbox"/>	phlebotomy	<input type="checkbox"/>	<input type="checkbox"/>	present a formal lecture
<input type="checkbox"/>	<input type="checkbox"/>	pulmonary function testing	<input type="checkbox"/>	<input type="checkbox"/>	present formal conferences
<input type="checkbox"/>	<input type="checkbox"/>	audiometry	<input type="checkbox"/>	<input type="checkbox"/>	consultation with physician
<input type="checkbox"/>	<input type="checkbox"/>	vision screening	<input type="checkbox"/>	<input type="checkbox"/>	consultation with nurses
<input type="checkbox"/>	<input type="checkbox"/>	dilation of pupils	<input type="checkbox"/>	<input type="checkbox"/>	consultation with NPs
<input type="checkbox"/>	<input type="checkbox"/>	fluorescein eye staining	<input type="checkbox"/>	<input type="checkbox"/>	precepting students
<input type="checkbox"/>	<input type="checkbox"/>	eye irrigation	<input type="checkbox"/>	<input type="checkbox"/>	develop teaching materials
<input type="checkbox"/>	<input type="checkbox"/>	ear irrigation	<input type="checkbox"/>	<input type="checkbox"/>	management of a budget
<input type="checkbox"/>	<input type="checkbox"/>	excision of foreign body	<input type="checkbox"/>	<input type="checkbox"/>	talking with a pharmaceutical rep.
<input type="checkbox"/>	<input type="checkbox"/>	suturing	<input type="checkbox"/>	<input type="checkbox"/>	ordering equipment
<input type="checkbox"/>	<input type="checkbox"/>	cautery for wart removal	<input type="checkbox"/>	<input type="checkbox"/>	ordering medications from suppliers
<input type="checkbox"/>	<input type="checkbox"/>	incision and drainage	<input type="checkbox"/>	<input type="checkbox"/>	writing prescriptions
<input type="checkbox"/>	<input type="checkbox"/>	ear piercing	<input type="checkbox"/>	<input type="checkbox"/>	dispensing medications
<input type="checkbox"/>	<input type="checkbox"/>	gastric lavage	<input type="checkbox"/>	<input type="checkbox"/>	giving immunizations
<input type="checkbox"/>	<input type="checkbox"/>	IV catheter insertion	<input type="checkbox"/>	<input type="checkbox"/>	giving therapeutic injections
<input type="checkbox"/>	<input type="checkbox"/>	CPR	<input type="checkbox"/>	<input type="checkbox"/>	assisting with surgery
<input type="checkbox"/>	<input type="checkbox"/>	Artificial Respiration	<input type="checkbox"/>	<input type="checkbox"/>	trachibroncheal suctioning
<input type="checkbox"/>	<input type="checkbox"/>	ECG's	<input type="checkbox"/>	<input type="checkbox"/>	placing/changing dressings
<input type="checkbox"/>	<input type="checkbox"/>	interpreting an ECG	<input type="checkbox"/>	<input type="checkbox"/>	wound/dressing evaluation
<input type="checkbox"/>	<input type="checkbox"/>	bone marrow aspiration	<input type="checkbox"/>	<input type="checkbox"/>	casting
<input type="checkbox"/>	<input type="checkbox"/>	thoracentesis	<input type="checkbox"/>	<input type="checkbox"/>	splinting
<input type="checkbox"/>	<input type="checkbox"/>	lumbar puncture	<input type="checkbox"/>	<input type="checkbox"/>	interpreting X-rays
<input type="checkbox"/>	<input type="checkbox"/>	suture removal	<input type="checkbox"/>	<input type="checkbox"/>	taking X-rays
<input type="checkbox"/>	<input type="checkbox"/>	pacemaker wires removal	<input type="checkbox"/>	<input type="checkbox"/>	applying ace bandages
<input type="checkbox"/>	<input type="checkbox"/>	throat cultures	<input type="checkbox"/>	<input type="checkbox"/>	breast examination
<input type="checkbox"/>	<input type="checkbox"/>	blood/urine exam with microscope	<input type="checkbox"/>	<input type="checkbox"/>	testicular examination
<input type="checkbox"/>	<input type="checkbox"/>	gram stains	<input type="checkbox"/>	<input type="checkbox"/>	vital signs evaluation
<input type="checkbox"/>	<input type="checkbox"/>	pap smears	<input type="checkbox"/>	<input type="checkbox"/>	billing
<input type="checkbox"/>	<input type="checkbox"/>	pelvic exams	<input type="checkbox"/>	<input type="checkbox"/>	computer data entry
<input type="checkbox"/>	<input type="checkbox"/>	rectal exams	<input type="checkbox"/>	<input type="checkbox"/>	mass casualty triage
<input type="checkbox"/>	<input type="checkbox"/>	hernia exams	<input type="checkbox"/>	<input type="checkbox"/>	conduct research
<input type="checkbox"/>	<input type="checkbox"/>	height/weight evaluation	<input type="checkbox"/>	<input type="checkbox"/>	environmental assessment
<input type="checkbox"/>	<input type="checkbox"/>	diaphragm fitting	<input type="checkbox"/>	<input type="checkbox"/>	nutrition counseling
<input type="checkbox"/>	<input type="checkbox"/>	dental exam	<input type="checkbox"/>	<input type="checkbox"/>	sports physicals
<input type="checkbox"/>	<input type="checkbox"/>	mouth exam with glove	<input type="checkbox"/>	<input type="checkbox"/>	IUD placement
<input type="checkbox"/>	<input type="checkbox"/>	culposcopy	<input type="checkbox"/>	<input type="checkbox"/>	performing minor surgery
<input type="checkbox"/>	<input type="checkbox"/>	sigmoidoscopy	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	intubation	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	draw blood cultures	<input type="checkbox"/>	<input type="checkbox"/>	_____
<input type="checkbox"/>	<input type="checkbox"/>	interpret lab work	<input type="checkbox"/>	<input type="checkbox"/>	_____

APPENDIX B: TABLES

Table B1

Clinical Practice Activities of Military Nurse Practitioners.

Practice activities	Taught but not perform		Perform but not taught		Taught and perform		Neither taught or perform	
	N	%	N	%	N	%	N	%
Complete histories	10	6.7	5	3.3	135	90.0	0	0
Complete physicals	12	8.0	6	4.0	130	86.7	2	1.3
Presurg. physicals	12	8.0	17	11.3	17	11.3	104	69.3
Employ. physical	8	5.3	22	14.7	24	16.0	96	64.0
School physicals	6	4.0	22	14.7	82	54.7	40	26.7
Episodic care	6	4.0	16	10.7	109	72.7	19	12.7
Phlebotomy	13	8.7	48	32.0	24	16.0	65	43.3
Pulm. func. test	11	7.3	16	10.7	8	5.3	115	76.7
Audiometry	13	8.7	18	12.0	14	9.3	105	70.0
Vision screening	26	17.3	22	14.7	52	64.7	50	33.3
Dilation of pupils	6	4.0	8	5.3	7	4.7	129	86.0
Fluores. eye stain	8	5.3	47	31.3	31	20.7	64	42.7
Eye irrigation	9	6.0	37	24.7	30	20.0	74	49.3
Ear irrigation	8	5.3	47	31.3	35	23.3	60	40.0
Excise forgn. body	4	2.7	18	12.0	18	12.0	110	73.3
Suturing	13	8.7	21	14.0	10	6.7	106	70.7
Cauterize wart	1	.7	44	29.3	19	12.7	86	57.3
Incision & drain.	3	2.0	32	21.3	21	14.0	94	62.7
continued								

Table B1, continued.

Practice activities	Taught but not perform		Perform but not taught		Taught and perform		Neither taught or perform	
	N	%	N	%	N	%	N	%
Conduct research	42	28.0	16	10.7	31	20.7	61	40.7
Enviro. assessment	13	8.7	16	10.7	23	15.3	98	65.3
Nutrition counsel.	4	2.7	37	24.7	86	57.3	23	15.3
Sports physicals	5	3.3	32	21.3	64	42.7	49	32.7
IUD placement	10	6.7	16	10.7	26	17.3	98	65.3
Perf. minor surg.	2	1.3	15	10.0	13	8.7	120	80.0

Note. N=Frequency of response; (%)=Valid percent of each variable; See Appendix A, Questionnaire, Part II, for explanation of abbreviations.

Table B2

Military Nurse Practitioners Clinical Practice Activities by
Descending Order of Frequency of Response.

Activity	N	Activity	N
Patient instruction	148	School physicals	104
Consult with physician	148	CPR	104
Writing prescriptions	148	Hernia exams	103
Interpreting lab work	143	Mass casualty triage	102
Consult with NPs	142	Sports physicals	96
Vital signs evaluation	142	Testicular examination	91
Complete histories	140	Pelvic exams	90
Throat cultures	140	Pap smears	89
Complete physicals	136	Interpreting X-rays	89
Family instruction	136	Give injections	84
Staff inservice	136	Ear irrigation	82
Breast examination	135	Wound/dressing eval.	80
Talk with a pharm. rep.	134	Suture removal	79
Height/weight evaluation	130	Applying ace bandages	79
Telephone triage	128	Fluorescein eye staining	78
Teach in class setting	128	IV catheter insertion	78
Develop teach. materials	128	Artificial respirations	78
Consult with nurses	127	Mouth exam with gloves	76
Episodic care	125	Dispensing medications	76
Nutrition counseling	124	Diaphragm fitting	75
Rectal exams	122	Vision screening	74
Present a formal lecture	122	Pres. formal conference	74
Precepting students	122	Place/change dressings	74
continued			

Table B2, continued.

Activity	N	Activity	N
Phlebotomy	72	Splinting	28
Eye irrigation	67	Performing minor surgery	28
Cautery for wart removal	63	Gram stains	27
Computer data entry	61	Order meds	25
Draw blood cultures	60	Pulmonary funct. testing	24
Incision and drainage	53	Gastric lavage	20
Ordering equipment	50	Colposcopy	19
Conduct research	47	Intubation	16
Employment physicals	46	Dilation of pupils	15
Giving immunizations	46	Assisting with surgery	14
Interpreting ECGs	45	Suctioning	14
IUD placement	42	Casting	11
ECGs	39	Billing	10
Environmental assessment	39	Taking X-rays	5
Exam with microscope	38	Ear piercing	4
Excision of foreign body	36	Lumbar Puncture	2
Management of a budget	35	Bone marrow aspiration	1
Presurgery physicals	34	Pacemaker wires removal	1
Dental exam	33	Thoracentesis	0
Audiometry	32	Sigmoidoscopy	0
Suturing	31		

Note. N=Frequency of combined "Taught and Perform" and "Perform but not Taught" responses.

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